Building an Information System for a Higher Education Register in Croatia

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- Vision and Objective
- Information Landscape of a Higher Education in Croatia
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- Development approach
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Vision
National information systems for science and higher education

CroRIS = Croatian Research Information System
ISeVO = Information System for Higher Education Register
ISpPU = Information System for Monitoring Program Contracts
The Objective
# Information Landscape of a Higher Education in Croatia

## STUDENT ROADMAP

<table>
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<tr>
<th>ENROLMENT</th>
<th>STUDYING</th>
<th>GRADUATION</th>
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<tr>
<td>HEI specific IS</td>
<td>Student management system</td>
<td>ISVU</td>
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<td>National IS</td>
<td>NISpVU</td>
<td>ISSP</td>
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<td>Study programs register</td>
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<td>HEI register</td>
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**HEI register**

**ISAK**

**ISSP**

**ISVU**

**NISpVU**

**Student management system**
System Design

Users  Processes  Data  Architecture
Users

- Ministry of Science and Education
- Agencies
- Higher education institutions
- Business entities providing services to students
- Students
- Public
Main Processes

» Data collection, delivery and storage

» Calculation of student rights for student nourishment and student work

» Analysis and reporting
Architecture and Software Modules

System Architecture

- PRESENTATION LAYER
  - Client
  - Client
  - Client

- APPLICATION LAYER
  - Business logic
  - WEB SERVER
  - APPLICATION SERVER

- DATA LAYER
  - DATABASE SERVER

Software Modules

- WEB APPLICATIONS
  - ISeVO PORTAL
  - ADMINISTRATION
  - HEI & STUDY PROGRAMS
  - ENROLLMENTS
  - STUDENTS
  - STUDENT STANDARD
  - EMPLOYEES
  - DIPLOMAS

- SERVER-SIDE APPLICATIONS
  - ISVU client
  - HZMO client
  - ISSP client
  - CroRIS client
  - NISpVU client
  - SOCIO client
  - HKO client
  - STEM client
  - Module #1
  - Module #2
  - Module #N
Development Approach
Agile Development Approach

**Basic idea**
- Enable quick delivery of valuable parts of the system
- Constantly develop and upgrade software modules with additional features
- Have end-users and stakeholders involved in the project all the time
2022.
- System design document for ISeVO

2023
- Public procurement of external programming services
- ISeVO core library

2024
- Connecting the Register of Higher Education Institutions and the Register of Study Programs
- Enrollments register

2025
- Digital diploma register
- Students register

2026
- Employees register
- ISpPU

Connecting the Register of Higher Education Institutions and the Register of Study Programs
Anticipated Challenges

- Heterogeneity of data sources
- Engagement of stakeholders and end-users
- Resistance to change
- Lack of resources and short deadlines
Current Status of the Project

- Public procurement process for external programming services
- Preparation of the development environment
- Development of web application for connecting the Register of Higher Education Institutions and the Register of Study Programs
Conclusion

- New Registers to be build:
  - Enrollments, Students, Employees, Diplomas

- A lot of work ahead of us, big impact on existing systems

- Have in mind final goal, objective and vision

Data collection from various sources

THE source of truth

Strong emphasis on analysis and reporting
Questions and Comments?
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Thank you!

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University Computing Centre - Srce

- founded in 1971, part of the University of Zagreb
- is heart of Croatian academic and research e-infrastructure
- is one of the key subjects in planning, designing, construction and maintenance of the advanced computing, communication and information systems and services for A&R community in HR
- ensures connection of Croatian A&R e-infrastructure with related European and global e-infrastructures
- provides consulting, expert and educational support in the field of ICT to all subjects of the academic and research community
- promotes, fosters and supports innovative usage of ICT in education and research
- ≈160 employees
- 2 data centers
e-Sveučilišta Project

- Investment: Digital transformation of higher education
- Investment holder: Ministry of Science and Education
- Project coordinator: Croatian Academic and Research Network - CARNET
- Project value: 84 million euros
- Partners:
  - University Computing Center (Srce)
  - Agency for Science and Higher Education (AZVO)
  - National University Library (NSK)

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